



## CONTENTS

<u>Section</u>		<u>Page</u>
I	Top Ten Reportable Diseases in Missouri as of June 5, 2004	1
II	In the Spotlight – West Nile Virus	3
III	Distribution of Reported Cases, by Disease Category	7
IV	Links to other Communicable Disease Surveillance Reports	8

### [Section I: Top Ten Reportable Diseases in Missouri as of June 5, 2004\\*](#)

The following data were reported through the MISSOURI HEALTH SURVEILLANCE INFORMATION SYSTEM (MOHSIS) and the TUBERCULOSIS INFORMATION MANAGEMENT SYSTEM (TIMS). For diseases reported through MOHSIS, counts include confirmed and probable cases only, except for acute Hepatitis C that includes only confirmed cases. For tuberculosis reported through TIMS, counts include only verified cases of TB disease.

As of Report Week #22 (week ending June 5), influenza and chronic Hepatitis C were the two most common reportable diseases in Missouri; with over one thousand reported cases each (**Table 1**). Salmonellosis, campylobacteriosis, and giardiasis were the next most common diseases; with approximately two hundred reported cases each.

Of the ten diseases with the highest number of reported cases through Report Week #22, the year-to-date case count of six significantly exceeded the 5-year median value (**Table 1**). These six diseases were influenza, acute and chronic Hepatitis C, acute and chronic Hepatitis B, and pertussis. A portion of this increase may reflect improvements in reporting. Conversely, the year-to-date case count of two diseases (i.e., giardiasis and shigellosis) was significantly below the 5-year median (**Table 1**).

*\* Data analysis in this section does not include sexually transmitted diseases. Additionally, all 2004 communicable disease data presented in this section are provisional.*

**Section I: Top Ten Reportable Diseases in Missouri as of June 5, 2004 - Continued**

Table 1. Top Ten (by Count) Reportable Diseases and/or Conditions in Missouri – **excluding sexually transmitted diseases** – as of June 5, 2004 (Report Week #22).

Top Ten Diseases/Conditions	Year to Date 2004	5-Year Median (1999-2003)	Percent of Median	2004 Crude Rate per 100,000 <sup>a</sup>
Influenza	4,289	2,418	177	76.65
Hepatitis C, Chronic Infection <sup>b</sup>	1210	531	228	21.63
Salmonellosis	202	221	91	3.61
Campylobacteriosis	195	191	102	3.49
Giardiasis	192	234	82	3.43
Hepatitis C, Acute Infection	130	19	684	2.32
Pertussis	123	28	439	2.20
Hepatitis B, Acute Infection	112	57	196	2.00
Hepatitis B, Chronic Infection <sup>c</sup>	73	39	187	1.30
Shigellosis	56	130	43	1.00

*a) Crude rates calculated using 2000 U.S. Census data.*

*b) Prior to 2002, Hepatitis C, chronic infection was not reportable. As a result, the interpretive utility of the 5-year median value for chronic Hepatitis C is limited.*

*c) Hepatitis B, chronic infection did not become reportable until 2003. As a result, year-to-date data for 2003 was substituted for the 5-year median value.*

## **Section II: In the Spotlight: West Nile Virus**

*The Epidemiology of West Nile Virus.*<sup>1,2</sup> West Nile virus (WNV) is a potentially serious illness. WNV is commonly found in Africa, West Asia, and the Middle East. It is not known how long it has been in the U.S., but it has probably been in the eastern U.S. since the early summer of 1999. Experts believe WNV is established as a seasonal epidemic in North America that flares up in the summer and continues into the fall. The virus can infect humans, birds, mosquitoes, horses and some other mammals.

Most often, WNV is spread by the bite of an infected mosquito. Mosquitoes are WNV carriers that become infected when they feed on infected birds. Infected mosquitoes can then spread WNV to humans and other animals when they bite. In a very small number of cases, WNV also has been spread through blood transfusions, organ transplants, breastfeeding and even during pregnancy from mother to baby. People typically develop symptoms between 3 and 14 days after the infected mosquito bites them.

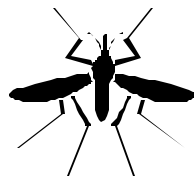
Approximately 80 percent of people infected with WNV will not show any symptoms at all. Up to 20 percent of the people who become infected will display symptoms which can include fever, headache, and body aches, nausea, vomiting, and sometimes swollen lymph glands or a skin rash on the chest, stomach and back. Symptoms can last for as short as a few days, though even healthy people have been sick for several weeks. The most severe type of disease due to a person being infected with WNV is sometimes called neuro-invasive disease and includes West Nile encephalitis, West Nile meningitis, and West Nile meningo-encephalitis. About one in 150 people infected with WNV will develop a severe illness. The severe symptoms can include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness and paralysis. These symptoms may last several weeks, and neurological effects may be permanent.

There is no specific treatment for WNV infection. Milder WNV illness improves on its own, and people do not necessarily need to seek medical attention for this infection though they may choose to do so. If you develop symptoms of severe WNV illness, such as unusually severe headaches or confusion, seek medical attention immediately. Severe WNV illness usually requires hospitalization. Pregnant women and nursing mothers are encouraged to talk to their doctor if they develop symptoms that could be WNV. The more time you spend outdoors, the greater your chances are to be bitten by an infected mosquito. Additionally, people over the age of 50 are more likely to develop serious symptoms of WNV if they do get sick and should take special care to avoid mosquito bites.

1. Department of Health and Human Services, Centers for Disease Control and Prevention > Division of Vector-Borne Infectious Diseases > West Nile Virus.  
<http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>
2. Communicable Disease Investigation Reference Manual – Revised 7/03. Missouri Department of Health and Senior Services, Division of Environmental Health and Communicable Disease Prevention, Section for Communicable Disease Prevention. Jefferson City, Mo.  
<http://www.dhss.mo.gov/CDManual/CDManual.htm>

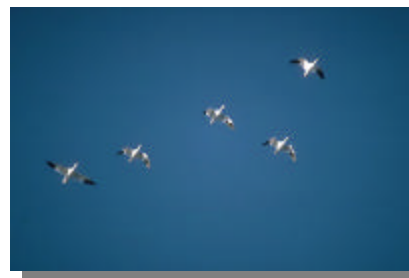
## **Section II: West Nile Virus - Continued**

To prevent infection with West Nile virus:



- ❖ Protect yourself from mosquito bites:
  - ✓ Apply insect repellent sparingly to exposed skin. The more DEET a repellent contains the longer time it can protect you from mosquito bites. DEET concentrations higher than 50% do not increase the length of protection, so repellent used on skin should have no more than 50% concentration of DEET.
  - ✓ Spray clothing with repellents containing permethrin or DEET since mosquitoes may bite through thin clothing. Do not apply repellents containing permethrin directly to exposed skin. Use repellents in accordance with label directions.
  - ✓ When possible, wear long-sleeved shirts and long pants whenever you are outdoors.
  - ✓ Place mosquito netting over infant carriers when you are outdoors with infants.
  - ✓ Consider staying indoors at dawn, dusk, and in the early evening, which are peak mosquito biting times.
  - ✓ Install or repair window and door screens so that mosquitoes cannot get indoors.
- ❖ Help reduce the number of mosquitoes in areas outdoors where you work or play, by draining sources of standing water. In this way, you reduce the number of places mosquitoes can lay their eggs and breed.
  - ✓ At least once or twice a week, empty water from flowerpots, pet food and water dishes, birdbaths, swimming pool covers, buckets, barrels, and cans.
  - ✓ Check for clogged rain gutters and clean them out.
  - ✓ Remove discarded tires, and other items that could collect water.
  - ✓ Be sure to check for containers or trash in places that may be hard to see, such as under bushes or under your home.

**If you find a dead bird, don't handle the body with your bare hands. Contact your local health department for instructions on reporting and disposing of the body.**



## **Section II: West Nile Virus - Continued**

*West Nile Fever and West Nile Encephalitis (or Meningitis) in Missouri – 2003.* In 2003, there were 30 reported cases of confirmed and probable West Nile Fever and 39 reported cases of confirmed and probable West Nile Encephalitis or Meningitis.<sup>3</sup>

For West Nile Fever; 46.7% of the cases were male, 50.0% female, and the remainder did not have a gender designation. Considering race; 66.7% identified themselves as white, 6.7% as black, and the remainder did not have a race designation. The number of reported cases of West Nile Fever ranged from July to December, with the highest in September (Table 2). Over one-half of cases occurred in adults aged 35-54 years, while approximately one-quarter occurred in adults aged 65+ years. The Eastern and Northwest Health Regions each had approximately one-third of reported cases, while approximately one-quarter occurred in the Central Health Region.

Table 2. Distribution of Reported Cases of Confirmed and Probable West Nile Fever; by Month, Age Group, and Health Region, Missouri, 2003.

<b>Month</b>	<i>Percent of Cases</i>	<b>Age Group</b>	<i>Percent of Cases</i>	<b>Health District</b>	<i>Percent of Cases</i>
<b>January</b>	--	<b>0-4</b>	3.3%	<b>Northwest</b>	33.3%
<b>February</b>	--	<b>5-14</b>	--	<b>Eastern</b>	36.7%
<b>March</b>	--	<b>15-24</b>	6.7%	<b>Central</b>	26.7%
<b>April</b>	--	<b>25-34</b>	3.3%	<b>Southeast</b>	--
<b>May</b>	--	<b>35-44</b>	23.3%	<b>Southwest</b>	3.3%
<b>June</b>	--	<b>45-54</b>	23.3%	<b>Out-of-State</b>	--
<b>July</b>	--	<b>55-64</b>	16.7%	<b>Unknown</b>	--
<b>August</b>	23.3%	<b>65-74</b>	3.3%		
<b>September</b>	53.3%	<b>75-84</b>	20.0%		
<b>October</b>	13.3%	<b>85+</b>	--		
<b>November</b>	3.3%	<b>Unknown</b>	--		
<b>December</b>	6.7%				

-- Indicates no reported confirmed or probable case(s) in this socio-demographic category

For West Nile Encephalitis or Meningitis; 64.1% of the cases were male and 35.9% female. Considering race; 46.2% identified themselves as white, 17.9% as black, 2.6% as Indian, and the remainder did not have a race designation. Finally, 5.1% indicated a Hispanic ethnicity. The number of reported cases of West Nile Encephalitis or Meningitis ranged from August to October, with the highest in September (Table 3). Approximately one-half of cases occurred in adults aged 65+ years. Over one-half of cases occurred in the Eastern Health Region, while approximately one-third occurred in the Northwest Health Region.

3. 2003 Annual Report: Bioterrorism, Communicable Disease, and Environmental Surveillance. Office of Surveillance, Division of Environmental Health and Communicable Disease Prevention, Missouri Department of Health and Senior Services. Jefferson City, Mo.  
<http://www.dhss.mo.gov/CommunicableDisease/03Annual.pdf>

## **Section II: West Nile Virus - Continued**

Table 3. Distribution of Reported Cases of Confirmed and Probable West Nile Encephalitis or Meningitis; by Month, Age Group, and Health Region, Missouri 2003.

<b>Month</b>	<i>Percent of Cases</i>	<b>Age Group</b>	<i>Percent of Cases</i>	<b>Health District</b>	<i>Percent of Cases</i>
<b>January</b>	--	<b>0-4</b>	2.6%	<b>Northwest</b>	35.9%
<b>February</b>	--	<b>5-14</b>	2.6%	<b>Eastern</b>	53.8%
<b>March</b>	--	<b>15-24</b>	2.6%	<b>Central</b>	--
<b>April</b>	--	<b>25-34</b>	5.1%	<b>Southeast</b>	5.1%
<b>May</b>	--	<b>35-44</b>	7.7%	<b>Southwest</b>	5.1%
<b>June</b>	--	<b>45-54</b>	17.9%	<b>Out-of-State</b>	--
<b>July</b>	--	<b>55-64</b>	10.3%	<b>Unknown</b>	--
<b>August</b>	28.2%	<b>65-74</b>	25.6%		
<b>September</b>	56.4%	<b>75-84</b>	23.1%		
<b>October</b>	15.4%	<b>85+</b>	2.6%		
<b>November</b>	--	<b>Unknown</b>	--		
<b>December</b>	--				

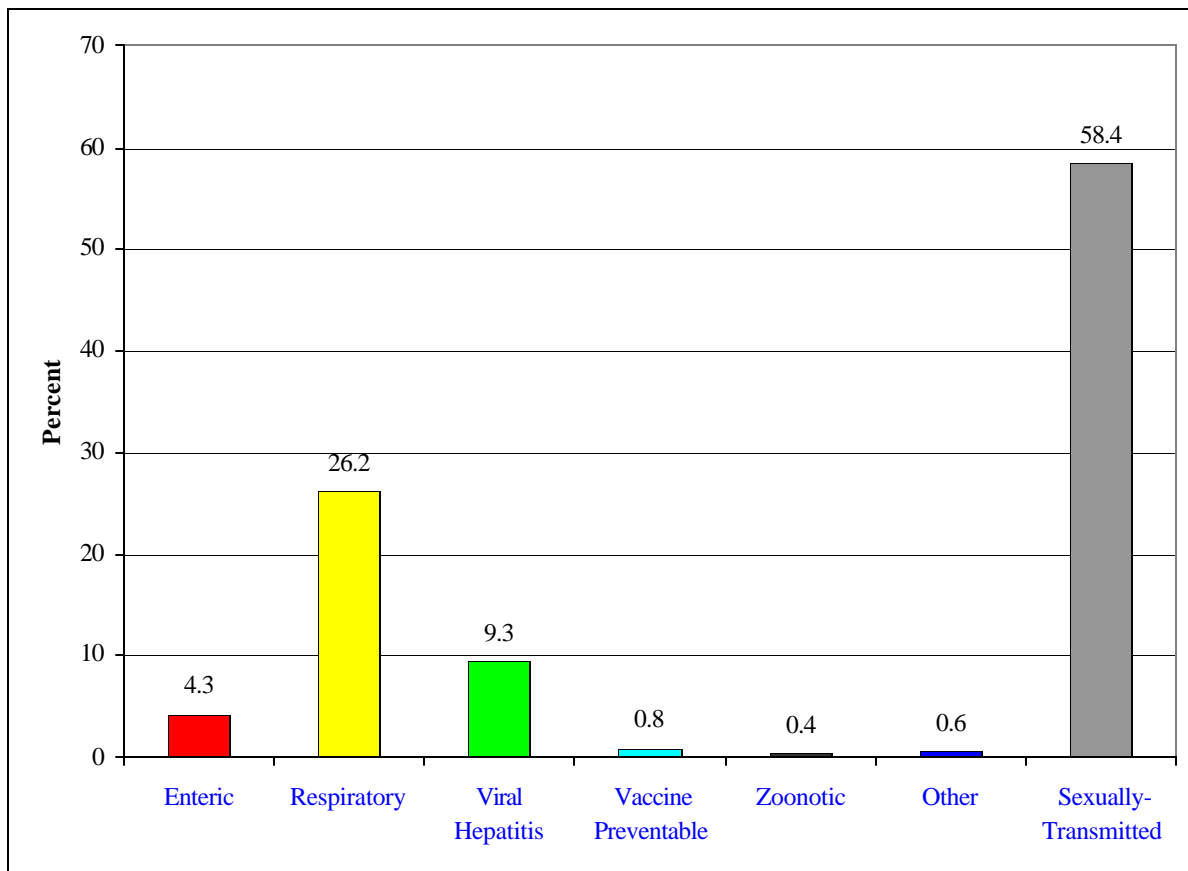
-- Indicates no reported confirmed or probable case(s) in this socio-demographic category

### **Section III: Distribution of Reported Cases, by Disease Category\***

Excluding the 'Animal Bite' classification; sexually-transmitted diseases – **excluding HIV** – comprised the largest percentage of cases (58.4%) reported as of June 5, 2004 (Report Week #22) (Figure 1).<sup>\*</sup> Respiratory diseases comprised the next largest percentage of cases (26.2%), followed by viral hepatitis (9.3%) and enteric diseases (4.3%). The remaining disease categories (i.e., vaccine preventable, zoonotic, and other disease) comprised less than 1% each of the total number of reported cases.

***\* Data for sexually transmitted diseases (STD) are through April 30, 2004. Additionally, all 2004 communicable disease data presented in this section are provisional.***

Figure 1. Percentage of Reportable Diseases and/or Conditions in Missouri – **excluding HIV** – as of June 5, 2004 (Report Week #22) – by Disease Category.\*



## **Section IV: Links to other Communicable Disease Surveillance Unit Reports\***

### **Other Communicable Disease Surveillance Unit Reports**

<b>Report Title</b>	<b>Report Interval</b>	<b>Report Web Location</b>
Summary of Notifiable Diseases in Missouri	annual	<a href="http://www.dhss.mo.gov/CommunicableDisease/Reports.html">http://www.dhss.mo.gov/CommunicableDisease/Reports.html</a>
Previous Communicable Disease Newsletters	monthly	<a href="http://www.dhss.mo.gov/CommunicableDisease/Reports.html">http://www.dhss.mo.gov/CommunicableDisease/Reports.html</a>
Rabies Surveillance	monthly	<a href="http://www.dhss.mo.gov/Rabies/index.html">http://www.dhss.mo.gov/Rabies/index.html</a>
HIV/STD Statistical Reports	various	<a href="http://www.dhss.mo.gov/HIV STD AIDS/Data.html">http://www.dhss.mo.gov/HIV STD AIDS/Data.html</a>
Influenza Surveillance	weekly	<a href="http://www.dhss.mo.gov/Influenza/Reports.html">http://www.dhss.mo.gov/Influenza/Reports.html</a>

\* To obtain additional information please contact the Office of Surveillance at (573) 752-9071.

### **Other Communicable Disease Resources**

<b>Resource Title</b>	<b>Resource Web Location</b>
List of Diseases and Conditions Reportable in Missouri	<a href="http://www.dhss.mo.gov/CommunicableDisease/reportablediseaselist2.pdf">http://www.dhss.mo.gov/CommunicableDisease/reportablediseaselist2.pdf</a>
MDHSS Disease Case Report (CD-1)	<a href="http://www.dhss.mo.gov/CDManual/CDappends.pdf">http://www.dhss.mo.gov/CDManual/CDappends.pdf</a>
Communicable Disease Investigation Reference Manual	<a href="http://www.dhss.mo.gov/CDManual/CDManual.htm">http://www.dhss.mo.gov/CDManual/CDManual.htm</a>
Missouri Information for Community Assessment	<a href="http://www.dhss.mo.gov/MICA/nojava.html">http://www.dhss.mo.gov/MICA/nojava.html</a>

**Section III: Distribution of Reported Cases, by Disease Category:**

**Enteric**

NUMBER OF REPORTED CASES AS OF JUNE 21, 2004	
<i>ENTERIC DISEASES</i>	
Acute Gastrointestinal Illness	5
Botulism, Infant	1
Campylobacteriosis	195
Cryptosporidiosis	19
Cyclosporiasis	2
Escherichia Coli O157 H7	11
Escherichia Coli Shiga Toxin	6
Escherichia Coli Shiga Toxin (not SG)	3
Giardiasis	192
Hemolytic Uremic Syndrome	6
Salmonella	202
Shigellosis	56
Typhoid	1
Yersiniosis	10
<b>TOTAL</b>	<b>709</b>

**Section III: Distribution of Reported Cases, by Disease Category:**

**Respiratory**

NUMBER OF REPORTED CASES AS OF JUNE 21, 2004	
<i>RESPIRATORY DISEASES</i>	
Adult Respiratory Distress Syndrome	1
Blastomycosis	1
Coccidioidomycosis	3
Influenza	4289
Legionellosis	5
Tuberculosis	50
<b>TOTAL</b>	<b>4349</b>

**Section III: Distribution of Reported Cases, by Disease Category:**

**Viral Hepatitis**

NUMBER OF REPORTED CASES AS OF JUNE 21, 2004	
<i>VIRAL HEPATITIS</i>	
Hepatitis A	20
Acute Hepatitis B	112
Chronic Hepatitis B	73
Perinatal Hepatitis B	3
Acute Hepatitis C	130
Chronic Hepatitis C	1210
Hepatitis , other or unspecified	1
<b>TOTAL</b>	<b>1549</b>

**Section III: Distribution of Reported Cases, by Disease Category:**

**Vaccine Preventable**

NUMBER OF REPORTED CASES AS OF JUNE 21, 2004	
<i>VACCINE PREVENTABLE DISEASES</i>	
Mumps	2
Pertussis	123
Rubella	1
<b>TOTAL</b>	<b>126</b>

**Section III: Distribution of Reported Cases, by Disease Category:**

**Zoonotic**

NUMBER OF REPORTED CASES AS OF JUNE 21, 2004	
<i>ZOONOTIC DISEASES</i>	
Brucellosis	1
Ehrlichiosis HGE	1
Ehrlichiosis HME	3
Lyme	26
Malaria	4
Psittacosis	1
Q Fever	2
Rabies, animal	7
Rocky Mountain Spotted Fever	11
Tularemia	6
West Nile Virus Encephalitis/Meningitis	1
<b>TOTAL</b>	<b>63</b>

**Section III: Distribution of Reported Cases, by Disease Category:**

**Other**

NUMBER OF REPORTED CASES AS OF JUNE 21, 2004	
<i>OTHER DISEASES</i>	
Aseptic and Bacterial Meningitis, other	14
Meningitis, other (fungal)	5
Meningococcal Meningitis	8
Haemophilus Influenzae	14
Listeriosis	1
Streptococcal Disease, invasive Group A	40
Streptococcal Pneumonia	15
other	2
<b>TOTAL</b>	<b>99</b>

**Section III: Distribution of Reported Cases, by Disease Category:**

**Sexually Transmitted**

NUMBER OF REPORTED CASES AS OF APRIL 30, 2004		
SEXUALLY-TRANSMITTED DISEASES		
	Chlamydia	6839
	Gonorrhea	2774
	Syphilis - Early	24
Syphilis - Latent, Late/Duration Unknown		38
	Syphilis - Congenital	1
	TOTAL	9676